



DEPARTMENT OF
ECOLOGY
State of Washington

Small Business Economic Impact Statement (Revised)

Chapter 173-182 WAC

Oil Spill Contingency Plan

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Small Business Economic Impact Statement (Revised)

Chapter 173-182 WAC Oil Spill Contingency Plan

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Executive Summary

The Washington State Department of Ecology (Ecology) is amending Washington Administrative Code (WAC) regulatory chapter 173-182 (Oil Spill Contingency Plans) to implement Chapter 122, 2011 Laws (E2SHB 1186). The rule amendments include changes to:

- Update state oil spill preparedness planning standards to incorporate best achievable protection and best available technology.
- Enhance the state’s current Vessels of Opportunity (VOO) system.
- Establish a volunteer coordination system.
- Require joint large-scale equipment deployment drills from tank vessels.
- Enhance the state-required notification process to include potential spill threats as well as actual spills.
- Change contingency plan requirements for nonprofit “umbrella” organizations to allow for a planning structure that supports approval of plans with a tiered approach.
- Update definitions.
- Make other changes related to Ecology’s contingency plan review and approval process.

Ecology last updated the oil spill contingency planning rule in 2007. Since the last update to the rule, two large oil spills – a spill in San Francisco, CA (the Cosco Bursan oil spill) and a spill along the Gulf Coast (the Deepwater Horizon oil spill) – have impacted waters in the United States. These spills provided valuable lessons learned about our preparedness framework, and influenced a change in the law. The rule amendments are intended to incorporate lessons learned to influence changes to specific spill planning standards and drill standards.

Ecology calculated cost-to-employment ratios to examine the relative impacts of the rule amendments on small versus large businesses. Ecology also considered the impacts of the amendments on local governments and other small public entities, to meet the requirements in the Governor’s Executive Order 10-06.¹ Ecology was not able to get sufficient data for other measures (sales, hours of labor) often used to identify all businesses’ ability to cope with compliance costs.

When comparing the per-employee costs of compliance with the rule amendments, for overall program costs, Ecology found that small businesses (with 50 or fewer employees) impacted by the rule incur compliance costs of \$268 to \$8.5 thousand per employee, while the largest ten percent of businesses incur costs of \$5 to \$7 per employee.

Ecology’s scope in reducing the impacts specifically to small businesses was limited by the scope of this rulemaking. The above disproportionate impacts, however, are mitigated – if not eliminated – by basic business behaviors and characteristics. The smaller primary response contractors (PRCs) perform limited or specialized tasks, and may not incur the costs of many of the new requirements under the rule amendment – simply because that PRC does not perform those contracted tasks. The large PRCs, on the other hand, perform a broader range of contracted tasks, and are likely to incur more of the new requirements under the rule amendments than small PRCs are.

¹ http://www.governor.wa.gov/news/Executive_Order_10-06.pdf

Based on the Washington State Office of Financial Management's Input-Output model of the state economy, Ecology calculated likely jobs outcomes. As compliance costs reduce direct employment in complying industries, they become transfers of income to other industries that manufacture and support equipment (on-water, aerial), as well as those submitting for Vessels of Opportunity (VOO) training. Overall, the rule amendments likely result in net short-term gains in employment of 20 to 47 jobs. These prospective changes in overall employment in the state are actually the sum of multiple small increases and decreases across industries in the state, in addition to larger losses in water transportation, and to the large gains in the aircraft and ship manufacturing industries.

Section 1: Introduction and Background

Based on research and analysis required by the Regulatory Fairness Act – RCW 19.85.070 – Ecology has determined the rule amendments to Chapter 173-182 WAC are likely to have a disproportionate impact on small business. Therefore, Ecology included disproportionate cost-minimizing features in the rule where it is legal and feasible to do so.

This document presents the:

- Background for the analysis of impacts on small business relative to other businesses.
- Results of the analysis.
- Cost-mitigating action taken by Ecology.
- Expected net impact on jobs statewide.

This document is intended to be read with the associated Cost-Benefit Analysis (Ecology publication #12-08-014), which contains more in-depth discussion of the analyses, as well as references and appendices.

A small business is defined as having 50 or fewer employees. Estimated costs are determined as compared to the existing regulatory environment—the way oil spill contingency planning would be regulated in the absence of the rule amendments.

The SBEIS only considers costs to “businesses in an industry” in Washington State. This means that impacts, for this document, are not evaluated for non-profit agencies, or for government agencies. Within this definition, there are no small approved plan or umbrella plan holders. Smaller local offices of larger parent companies are considered based on the size of their parent, as this is a better reflection of ability to cope with compliance costs, relative to independent small businesses.

The existing regulatory environment is called the “baseline” in this document. It includes only existing laws and rules at federal and state levels.

Description of the rule amendments

The rule amendments:

- Update state oil spill preparedness planning standards to incorporate best achievable protection and best available technology.
- Enhance the state’s current vessels of opportunity system.
- Establish a volunteer coordination system.
- Require joint large-scale equipment deployment drills from tank vessels.
- Enhance the state-required notification process to include potential spill threats as well as actual spills.
- Change contingency plan requirements for nonprofit “umbrella” organizations to allow for a planning structure that supports approval of plans with a tiered approach.
- Update definitions.

- Make other changes related to Ecology’s contingency plan review and approval process.

Reasons for the rule amendments

Following the direction of the legislature in ESHB 1186, the rule amendments would require response system improvements through a combination of best available technology and best available protection. The equipment, training, and planning elements required through these rule amendments strive to pair the right equipment with well-trained personnel. These elements are essential in delivering a rapid, aggressive, and well-coordinated response to large spills.

The rule amendments are a step toward building a response system that utilizes best achievable protection to strengthen our ability to operate safely and continuously at night and during inclement weather conditions including rain, fog, waves, and high currents that are often experienced in Washington State waters.

To this end, the rule requires investment in:

- New aerial surveillance capability.
- Recovery equipment capable in waves and higher encounter rates.
- Training of oil-spill response personnel.
- Vessels of opportunity and crew.
- Technical manuals as a way to communicate how the plan holder’s response capability represents best achievable protection, which can be verified over time using the five-year best achievable protection review cycle.

Ecology last updated the oil spill contingency planning rule in 2007. Since the last update to the rule, two large oil spills – a spill in San Francisco, CA (the Cosco Bursan oil spill) and a spill along the Gulf Coast (the Deepwater Horizon oil spill) – have impacted waters in the United States. These spills provided valuable lessons learned about our preparedness framework, and influenced a change in the law. The rule amendments are intended to incorporate lessons learned to influence changes to specific spill planning standards and drill standards.

Through the rule amendments, Ecology is enhancing the current VOO requirements and strengthening our ability to respond to oil spills. The extensive use of commercial fishing and other vessels during the Deepwater Horizon Spill response demonstrated the value of partnering with local marine professionals ahead of a large spill to ensure VOO are well-trained and can operate safely as an effective part of spill response.

Regulatory baseline

In most cases, the regulatory baseline for analysis is the existing rule. Where there is no existing rule, federal and local regulations are the baseline. In the case of the amendments to the Oil Spill Contingency Plans rule, the existing rule and existing federal requirements

comprise the baseline. See the associated Cost-Benefit Analysis (Ecology publication no. 12-08-014) for extensive discussion of the baseline.

Section 2: Compliance Costs

Different types of covered vessels, facilities, and entities are affected differently by the rule. Most covered vessels use umbrella plans (two approved non-profit organizations that hold plans for 1,500 vessels in the Columbia River, and 1353 vessels along the outer coast, in the Strait of Juan de Fuca, and in Puget Sound). There are 28 additional independent approved plans (for individual firms or subsidiaries).

Plan holders in any of these cases (whether they are vessels, facilities, or umbrella plans) may contract with 12 state-approved primary response contractors (PRCs) to plan, prepare for, and execute required actions.

Ecology multiplied unit costs as calculated in the next section by the expected quantities of compliance behavior with the rules, as based on:

- 1,500 vessels in Columbia River umbrella plan (1 umbrella plan).
- 1,353 vessels in outer coast, Strait of Juan de Fuca, and Puget Sound (1 umbrella plan).
- 22 independent approved facility contingency plans.
- 6 independent approved vessel contingency plans.
- 12 PRCs.

Ecology estimated present value compliance costs over 20 years.

Ecology estimated costs as follows. For a full discussion of cost calculation methodologies and sources, see the Cost-Benefit Analysis (Ecology publication #12-08-014). Note that all costs are estimated conservatively high when dealing with uncertainty.

Ecology estimated the likely costs of the rule amendments to be:

Table 1: Present-Value Costs of the Rule Amendments (asset sharing)

Cost	Low Present Value	High Present Value
FLIR (aerial surveillance) plus additional Best Available Technology (BAT) capability	\$300,000	\$700,000
Additional spotting resources	\$691	\$5,000
Four-hour planning standard	\$350,000	\$1,750,000
Dedicated on-water storage	\$250,000	\$1,000,000
Dedicated on-water storage maintenance	\$205,327	\$821,308
Describe storage and recovery as systems	\$1,727	\$10,000
100 shore cleanup workers and supervisors	\$867	\$4,000
9 miles passive cleanup equipment	\$55,000	\$55,000
Plan update with process to obtain additional resources	\$691	\$4,000
VOO database (Ecology cost)	\$27,000	\$27,000
VOO database ongoing costs (Ecology cost)	\$303,884	\$303,884
Vetting VOO	\$48,649	\$59,489
VOO training	\$3,566,975	\$3,997,472

VOO deployment drill	\$1,117,595	\$1,252,477
Identify worst-case discharge volume	\$86	\$500
Identify spill management team for all enrolled members	\$86	\$500
Describe process for activating supplemental resources	\$1,727	\$10,000
Identify and list staff to be deployed	\$1,036	\$6,000
Train staff to be deployed	\$158,510	\$504,350
List response equipment on database	\$1,036	\$6,000
List all staff, training, VOO, communications assets, remedial substances in contracts	\$2,073	\$3,840
TOTAL 20-YEAR PRESENT VALUE COST	\$6,392,961	\$10,528,981

If assets could not be shared with the Columbia River umbrella plan, Ecology estimated the likely costs of the rule amendments to be:

Table 2: Present-Value Costs of the Rule Amendments (no Columbia River umbrella plan sharing)

Cost	Low Present Value	High Present Value
FLIR plus additional BAT capability	\$600,000	\$1,400,000
Additional spotting resources	\$691	\$4,000
Four-hour planning standard	\$350,000	\$1,750,000
Dedicated on-water storage	\$500,000	\$1,000,000
Dedicated on-water storage maintenance	\$410,654	\$821,308
Describe storage and recovery as systems	\$3,454	\$50,000
100 shore cleanup workers and supervisors	\$867	\$5,000
9 miles passive cleanup equipment	\$110,000	\$110,000
Plan update with process to obtain additional resources	\$691	\$4,000
VOO database (Ecology cost)	\$27,000	\$27,000
VOO database ongoing costs (Ecology cost)	\$303,884	\$303,884
Vetting VOO	\$48,649	\$59,489
VOO training	\$3,566,975	\$3,997,472
VOO deployment drill	\$1,117,595	\$1,252,477
Identify worst-case discharge volume	\$86	\$500
Identify spill management team for all enrolled members	\$86	\$500
Describe process for activating supplemental resources	\$1,727	\$10,000
Identify and list staff to be deployed	\$1,036	\$6,000
Train staff to be deployed	\$158,510	\$504,350
List response equipment on WRRL (or equivalent)	\$1,036	\$6,000
List all staff, training, VOO, communications assets, remedial substances in contracts	\$2,073	\$12,000
TOTAL 20-YEAR PRESENT VALUE COST	\$7,205,016	\$11,323,981

To be able to apply appropriate compliance costs to individual plan holders, Ecology separated costs into the following groups.

- Approved vessel plan holder costs

- Umbrella plan holder costs
- PRC costs (likely to be passed on to plan holders)
- Shared asset costs (shared by the above, as well as facility plan holders)

Table 3: Costs by Group (asset sharing)

Approved plan holder costs	low	high	# of entities
Additional spotting resources	\$691	\$4,000	8
Technical manual systems descriptions	\$1,727	\$10,000	8
Contracting time for shoreline cleanup and supervisors	\$867	\$5,000	8
Updating plans for additional resource procedures	\$691	\$4,000	8
Umbrella plan holder costs	low	high	# of entities
Additional spotting resources	\$691	\$4,000	8
Technical manual systems descriptions	\$1,727	\$10,000	2
Contracting time for shoreline cleanup and supervisors	\$867	\$5,000	8
Updating plans for additional resource procedures	\$691	\$4,000	8
Identify worst case discharge volume	\$86	\$500	2
Identify spill management team	\$86	\$500	2
Require direct contract for all resource to meet the worst case discharge	\$1,727	\$10,000	2
PRC costs	low	high	# of entities
Identify staff expected to be deployed for oil spills or to meet planning standards	\$1,036	\$6,000	12
Train staff expected to be deployed for oil spills or to meet planning standards	\$158,510	\$504,350	12
List response equipment on WRRL or equivalent	\$1,036	\$6,000	12
Shared asset costs	low	high	# of entities
Mounted FLIR plus additional BAT capability	\$300,000	\$700,000	8
Four Hour Planning standard	\$350,000	\$1,750,000	8
Dedicated on-water storage	\$250,000	\$1,000,000	8
Dedicated on-water storage maintenance	\$205,327	\$821,308	8
9 miles of passive cleanup equipment	\$55,000	\$55,000	8
VOO Vessel Database	\$27,000	\$27,000	Ecology
VOO Vessel database maintenance	\$303,884	\$303,884	Ecology
Vetting VOO	\$48,649	\$59,489	8
VOO Training Specified	\$3,566,975	\$3,997,472	8
VOO Deployment	\$1,117,595	\$1,252,477	8

Table 4: Costs by Group (no Columbia River umbrella plan sharing)

	Outer Coast, Strait of Juan de Fuca, and Puget Sound	Columbia River
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Approved plan holder costs	Low	High	# of entities			
Additional spotting resources	\$605	\$3,500	7			
Technical manual systems descriptions	\$1,727	\$40,000	7			
Contracting time for shoreline cleanup and supervisors	\$759	\$4,375	7			
Updating plans for additional resource procedures	\$605	\$3,500	7			
Umbrella plan holder costs	Low	High	# of entities	Low	High	# of entities
Additional spotting resources	\$605	\$3,500	7	\$86	\$500	1
Technical manual systems descriptions	\$1,727	\$40,000	1	\$1,727	\$10,000	1
Contracting time for shoreline cleanup and supervisors	\$759	\$4,375	7	\$108	\$625	1
Updating plans for additional resource procedures	\$605	\$3,500	7	\$86	\$500	1
Identify worst case discharge volume	\$43	\$250	1	\$43	\$250	1
Identify spill management team	\$43	\$250	1	\$43	\$250	1
require direct contract for all resource to meet the worst case discharge	\$864	\$5,000	1	\$864	\$5,000	1
PRC costs	Low	High	# of entities			
Identify staff expected to be deployed for oil spills or to meet planning standards	\$1,036	\$6,000	12			
Train staff expected to be deployed for oil spills or to meet planning standards	\$158,510	\$504,350	12			
List response equipment on WRRL or equivalent	\$1,036	\$6,000	12			
Shared asset costs	Low	High	# of entities	Low	High	# of entities

Mounted FLIR plus additional BAT capability	\$300,000	\$700,000	7	\$300,000	\$700,000	1
Four Hour Planning standard	\$350,000	\$1,750,000	7	\$350,000	\$1,750,000	1
Dedicated on-water storage	\$250,000	\$1,000,000	7	\$250,000	\$1,000,000	1
Dedicated on-water storage maintenance	\$205,327	\$410,654	7	\$205,327	\$410,654	1
9 miles of passive cleanup equipment	\$55,000	\$55,000	7	\$55,000	\$55,000	1
VOO Vessel Database	\$27,000	\$27,000	Ecology			
VOO Vessel database maintenance	\$303,884	\$303,884	Ecology			
Vetting VOO	\$40,541	\$49,574	7	\$8,108	\$9,915	1
VOO Training Specified	\$2,972,479	\$3,331,227	7	\$594,496	\$666,245	1
VOO Deployment	\$931,329	\$1,043,731	7	\$186,266	\$208,746	1

Section 3: Quantification of Cost Ratios

Ecology calculated the estimated per-entity costs to comply with the rule amendments. Cost estimates and ranges are for the average or typical plan holder. This causes inherent estimation of disproportionate costs across differently-sized businesses. Similarly, different compliance costs for different entity types also inherently generate non-uniform costs.

In this section, Ecology summarizes compliance cost per employee at plan holders of different sizes. As expected, costs per employee are larger for smaller businesses, since compliance costs are calculated per plan holder, by type only. The table below summarizes total cost per entity, assuming uniform sharing of the costs of shared assets.

Table 5: Costs per Entity, by Type (asset sharing)

	Low Cost per Entity	Low Shared Asset Cost	High Cost per Entity	High Shared Asset cost	Low Total Cost per Entity	High Total Cost per Entity
Vessel Plan Holder	\$497	\$736,693	\$2,875	\$1,204,468	\$737,190	\$1,207,343
Umbrella Plan Holder*	\$2,106	\$736,693	\$11,750	\$1,204,468	\$738,799	\$1,216,218
PRC*	\$13,382		\$43,029		\$13,382	\$43,029
Facility Plan Holder	\$46	\$15,178	\$85	\$60,710	\$15,224	\$60,795

* Costs are likely to be passed on to plan holders and vessels.

Table 6: Costs per Entity, by Type (no Columbia River umbrella plan sharing)

Region	Entity	Low Cost per Entity	Low Shared Asset Cost	High Cost per Entity	High Shared Asset cost	Low Total Cost per Entity	High Total Cost per Entity
Outer Coast, Strait of Juan de Fuca, Puget Sound	Approved Plan Holder	\$528	\$729,239	\$7,339	\$1,191,455	\$729,767	\$1,198,794
	Umbrella Plan Holder*	\$2,893	\$729,239	\$46,750	\$1,191,455	\$732,132	\$1,238,205
	PRC*	\$13,382		\$43,029		\$13,382	\$43,029
Col. River	Umbrella Plan Holder*	2893	\$1,949,197	\$16,750	\$4,800,561	\$1,952,090	\$4,817,311

* Costs are likely to be passed on to plan holders and vessels.

The SBEIS only considers costs to “businesses in an industry” in Washington State. This means that impacts, for this document, are not evaluated for non-profit agencies, or for government agencies. Within this definition, there are no small approved plan or umbrella plan holders. Smaller local offices of larger parent companies are considered based on the size of their parent, as this is a better reflection of ability to cope with compliance costs, relative to independent small businesses.

In the PRC group, two are out-of-state, and one is a non-profit. These PRCs are excluded from this analysis as well.² Of the remaining nine PRCs, six are small businesses as defined in the statute governing this analysis (they have 50 or fewer employees). Under either asset sharing, or non-sharing with the Columbia River umbrella plan, these PRCs would incur per-employee costs of between \$268 and \$8.5 thousand. This range is higher than the comparable range for the largest ten percent of these businesses (one business), of \$5 to \$17 per employee.

Ecology acknowledges that costs to PRCs and umbrella plans are likely to be passed on to plan holders, and distributed across the vessels under the plans. Because contingency plan requirements are mandated, demand for plans and services is likely inelastic, particularly in light of the low likelihood that vessels will switch to using non-Washington ports (see the rule file for Ecology discussion of elements that go into the choice of ports, including contingency planning costs). As such, in a non-sharing scenario the Columbia River, PRC costs specific to that region’s plan would be passed on to approximately 1,500 covered vessels, and these vessels, in turn could bear a higher per-vessel burden.

Ecology similarly acknowledges that the costs of regional minimum VOO requirements may be borne locally, and pulled from local non-dedicated vessel fleets. As such, regions like Grays Harbor might have difficulty meeting (or bearing the costs of bringing in) adequate VOO under the proposed rule requirement of 12 vessels. These costs might be passed on to local vessels and small businesses. Ecology has mitigated these disproportionate costs under the final rule language, requiring fewer VOO for Grays Harbor (see below).

² Impacts to all entities, public and private, in-state and out-of-state are considered in the Cost-Benefit Analysis, Ecology publication 12-08-005.

Section 4: Action Taken to Reduce Small Business Impacts

The above disproportionate impacts are mitigated – if not eliminated – by basic business behaviors and characteristics. The smaller PRCs perform limited or specialized tasks, and may not incur the costs of many of the new requirements under the rule amendment – simply because that PRC does not perform those contracted tasks. The large PRCs, on the other hand, perform a broader range of contracted tasks, and are likely to incur more of the new requirements under the rule amendments than small PRCs are. Ultimately, one can argue that no PRC is required to take on any of the prospective new costs under the rule amendments, since none of them are required to be a PRC, and can instead focus on other contracted response tasks.

Ecology has also reduced the burden of the rule in areas likely to distribute the costs of the rule onto fewer covered vessels (likely to be small businesses as well). In Grays Harbor, the rule requires fewer VOO than in other regions, accounting for Grays Harbor's volume of traffic. Ecology scaled down requirements for the Columbia River (relative to Puget Sound, the Strait of Juan do Fuca, and the outer coast) to account for the smaller number of covered vessels under that region's umbrella plan.

Section 5: Small Business and Government Involvement

During the CR-101 (informal rulemaking phase) starting in January 2012, the department convened a special Rule Advisory Committee to provide informal comment on the draft regulation and advise Ecology about how environmental, economic and other issues might be addressed. The committee met regularly from January through June 2012. Committee members included invited representatives and observers from:

- Oil handling facilities and oil shipping companies
- Umbrella oil spill contingency plan holders
- Spill response contractors
- Tug and towing companies
- Commercial fishing vessels
- Cargo and other shipping companies
- Commercial shellfish growers
- Commercial fisheries
- Washington ports
- Tribal governments
- Counties and cities
- Environmental organizations
- Recreational interests
- State and federal agencies

Many of these committee members represented or were small businesses or local governments.

All of the committee meetings were open to the public and available through webinar.

Ecology met with the Rule Advisory Committee six times between January 2012 and June 2012. Each meeting focused on a specific topical area of the rule. Following the meeting, meeting notes and redrafted versions of the rule were developed to be revisited at future meetings. The iterative process helped to ensure sustained participation in the committee and more than one opportunity to comment on the draft language. Ecology prepared press releases, focus sheets and other explanatory materials for distribution to mailing and email lists for each of the committee meetings. In addition, information was posted on the spills program rule website which details the process and other opportunities for involvement.

Ecology also established special websites for the rule at: www.ecy.wa.gov/programs/spills/rules/1106.html and for the Rule Advisory Committee at www.ecy.wa.gov/programs/spills/rules/1106advisorycommittee.html. The initial draft rule, also available for public comment, was constantly updated and improved through this six-month iterative process. Ecology incorporated more than 300 comments, each of which served to improve the final updated draft rule language.

The department also distributed news releases to media across the state prior to each meeting (see www.ecy.wa.gov/news/2012/022.html, www.ecy.wa.gov/news/2012/061.html, www.ecy.wa.gov/news/2012/092.html, www.ecy.wa.gov/news/2012/121.html, and www.ecy.wa.gov/news/2012/153.html).

In addition, during the public comment process of this rulemaking, Ecology received input from:

- Island County Board of Commissioners
- Louis Dreyfus Commodities Northwest Facilities, LLC
- Citizens for a Healthy Bay
- Port of Portland
- Schnitzer Steel Industries
- Transmarine Navigation Corporation
- Olympic Coast National Marine Sanctuary
- Makah Office of Marine Affairs
- The American Waterways Operators
- Puget Sound Keeper
- International Group of P& I Clubs
- Navy Region Northwest
- Sause Bros. Inc.
- Clean Rivers Cooperative
- Western States Petroleum Association
- Friends of the Earth
- Inchcape Shipping Services
- Port of Longview
- Washington State Association of Counties
- Board of Clallam County Commissioners
- The Whale Museum
- Seattle Audubon Society
- Olympic Coast National Marine Sanctuary
- Maritime Fire and Safety Association
- Columbia River Steamship Operators Association
- Marine Spill Response Corporation
- Washington Public Ports Association
- K. Line America, Inc.
- Board of County Commissioners Skagit County Washington
- Schwabe, Williamson & Wyatt Attorneys at Law
- Olympic Tug & Barge
- Pacific Northwest Waterways Association
- San Juan County Council
- County Council, San Juan County
- Port of Kalama
- Pacific Merchant Shipping Association

- Pipeline Safety Trust
- Shaver Transportation Company
- Washington State Maritime Cooperative
- National Response Corporation Environmental Services
- Friends of the San Juans
- Safe Shipping Alliance of the Salish Sea
- FRIENDS of the San Juans
- Orcas NO COALition
- Lopez NO COALition
- North Sound Baykeeper, RE Sources for Sustainable Communities
- Protect Whatcom
- Wave Consulting
- Principle of Raven's Eye Environmental Consulting
- ForestEthics
- The Chuckanut Conservancy
- Friends of the Earth
- Whidbey Audubon Conservation Committee
- Kalama Export Company
- Port of Vancouver
- International Tanker Owners Pollution Federation Ltd
- U.S. Oil & Refining Co.
- Tidewater Barge Lines Inc.

Section 6: NAICS Codes of Impacted Industries

The table below lists NAICS codes for industries Ecology expects could be impacted by the rule amendments.³

Table 7: NAICS Codes that Include Businesses Possibly Needing to Comply with the Rule Amendments

541711	237120	237310
237110	483113	483211
488330	493190	424710
562910	424720	486110
561990	322110	541614
336611	324110	

³ North American Industry Classification System (NAICS) codes have largely taken the place of Standard Industry Classification (SIC) codes in the categorization of industries.

Section 7: Impact on Jobs

Ecology used the Washington State Office of Financial Management's 2002 Washington Input-Output Model⁴ to estimate the impact of the rule on jobs in the state. The model accounts for inter-industry impacts and spending multipliers of earned income and changes in output.

The rule will result in transfers of money within and between industries; plan holders and PRCs complying with the rule amendments will pay employees or businesses providing equipment or services, including VOO.

Under the low-cost estimates, the Washington State economy could experience a net gain of 24 jobs in the short run (under the rule amendments), as compliance costs transfer funds from complying entities to those manufacturing physical aerial and sea assets, and to training VOO. Similarly, under the high-cost estimates, the Washington State economy could gain 46 cumulative jobs in the short run, as expenditures on equipment and training support jobs in manufacturing and VOO. In a non-sharing scenario for the Columbia River umbrella plan, these net job gains become 26 and 43 net jobs gained. These prospective changes in overall employment in the state are actually the sum of multiple small increases and decreases across industries in the state, in addition to the large gains in the aircraft and ship manufacturing industries.

⁴ See the Washington State Office of Financial Management's site for more information on the Input-Output model. <http://www.ofm.wa.gov/economy/io/2002/default.asp>